Introduction

Antenatal ultrasonography is widely used in pregnancy to assess fetal growth, wellbeing and anatomy. Although ultrasound screening is now an integral part of routine antenatal care, recommendations for the delivery of obstetric ultrasound vary from country to country. A recent survey of English maternity units reported that 100% of women are offered routine mid-trimester fetal anomaly scanning, in line with expert recommendations. Currently in Ireland, no national guidance exists to inform practitioners on the minimum standards for obstetric ultrasound practice. In 2012, we conducted a structured telephone survey of all 20 maternity units in Ireland (n=74,377 births). Routine mid-trimester anomaly scanning was offered universally to all women in 7/20 (35%) units, offered selectively to some women in 9/20 (45%) units and not offered to any women in 4/20 (20%) of units. The time allotted for a complete fetal anatomical survey was 10-15 minutes in 4/16 (25%) units, 20 minutes in 7/16 (44%) units and 25-30 minutes in 5/16 (31%) units. Written guidelines on the appropriate management of soft markers for fetal aneuploidy were routinely used in 11/16 (69%) of units. In no Irish unit currently, are images from fetal anomaly scanning routinely reviewed by an Obstetrician with an interest in fetal medicine. 19/20 (95%) of respondents believed that a minimum of 2 scans should be offered in routine uncomplicated pregnancies. Improvements in the availability of obstetric ultrasound to pregnant women in Ireland will require increased staffing numbers at both the ultrasoundographer and fetal specialist level. There is a clear need for national guidelines on the provision of routine obstetric ultrasound in Ireland.

Methods

A telephone survey of Irish obstetric units was undertaken in January 2012. Respondents were asked to provide verbal and written information on their units’ mid-trimester fetal anomaly scan service. All 20 maternity units in Ireland were notified by our Unit to complete the current survey. Of the 20 Irish maternity units, NPEC classifies 6 as small units (<2,000 births per annum), 10 as medium-sized units (2,000-5,999 births per annum) and 4 as large units (≥6,000 births per annum). A recently published A 2008 guideline from the National Institute for Health and Clinical Excellence (NICE) endorses the 2-scan approach, suggesting that pregnant women should be offered an early ultrasound scan between 10 weeks 0 days and 13 weeks 6 days to determine gestational age and to detect multiple pregnancies and that ultrasound screening for fetal aneuploidies should be routinely offered, normally between 18 weeks 0 days and 20 weeks 6 days. Indeed, in the UK, the Department of Health have outlined an agreed policy for ultrasound screening of fetal aneuploidy – the NHS Fetal Anomaly Screening Programme (FASP) – which aims to offer all pregnancy women in England a minimum of two ultrasound scans. In the United States, the American College of Obstetricians and Gynecologists (ACOG) recommends that ideally, all women should be offered aneuploidy screening before 20 weeks gestation, regardless of maternal age.

Current evidence in Ireland, suggests that “pregnant women should be offered an early ultrasound scan between 10 weeks and e20 weeks in 12%, 44% and 44% respectively. Within units prepared to reveal gender, the diagnosis is made at e16 weeks, e18 weeks and the remaining 20% do not. Within units prepared to reveal gender, the diagnosis is made at e16 weeks, e18 weeks and e20 weeks in 12%, 44% and 44% respectively.

Routine Obstetric Ultrasound Services

Abstract:

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Results

The ESRI reported 74,377 notified births in Irish maternity units in 2011, which represents the highest birth rate per capita in the EU. Of the 20 Irish maternity units, NPEC classifies 6 as small units (<2,000 births per annum), 10 as medium-sized units (2,000-5,999 births per annum) and 4 as large units (≥6,000 births per annum). In total, 100% of Irish obstetric units were successfully contacted by telephone in January 2012 and completed the current survey. With regard to routine mid-trimester fetal anomaly scanning, this was offered universally to all women in 7 (35%) units, offered selectively to some women in 9 (45%) units and not offered to any women in 4 (20%) of units. In all cases a senior clinician, either a consultant obstetrician or the lead ultrasoundographer in a unit, was surveyed, to ensure that respondents had a thorough understanding of the service offered by their unit. Respondents were assured that results would be anonymised and that practice within individual units would not be made publicly available. Denominator data on total births and deliveries per maternity unit in Ireland in 2011 were obtained from the National Perinatal Reporting System (NPRS) within the Economic and Social Research Institute (ESRI) and from the annual report of the Cork-based National Perinatal Epidemiology Centre (NPEC).
Respondents were also surveyed on the staff who routinely perform fetal anomaly scanning in their unit. Within units offering fetal anomaly scanning, these are performed exclusively by midwife ultrasonographers or radiographers in 81% (n=15) of units and by a combination of consultants and midwives in the remaining unit (6%; Figure 2). Fetal anomaly scanning was not routinely undertaken by non-consultant hospital doctors in any unit. In no Irish unit currently, are images from fetal anomaly scanning routinely reviewed by an obstetrician with an interest in fetal medicine. Although the principal aim of this survey was to establish current practices in Irish routine fetal anomaly scanning, we also questioned respondents on early pregnancy ultrasonography within their units. A routine first trimester scan (d14 weeks) is offered to all patients in 13/20 (65%) of units and offered to some patients by 6/20 (30%) of units, generally for a recent obstetric history of clinical indication (pain, bleeding) in the current pregnancy. One unit does not provide lst trimester dating scans for any women. In 10/19 (53%) units, dating ultrasounds are performed exclusively by a midwife or radiographer. In 2011, 14/20 (70%) of Irish obstetric units were not offering nuchal translucency (NT) scanning as part of a screening package for fetal aneuploidy. Finally, respondents were asked about the proportion of ultrasound scans they believed should be offered to routinely and more than half of clinicians surveyed (55%) felt that women with uncomplicated pregnancies should be offered 3 ultrasound scans (Figure 3).

Discussion

As is noted in the recent ISUOG guideline, the purpose of the mid-trimester fetal anomaly scan is to provide accurate diagnostic information for the delivery of optimized antenatal care. The Eurofetus study, involving 14 European countries, reported an overall detection rate of 56% for structural fetal anomalies, rising to 74% when only major anomalies are considered. Prenatal diagnosis of a major fetal defect facilitates intrapartum and postpartum planning, allows psychological preparation on the part of the parents and may, in a few selected cases, allow the option of in utero fetal therapy to improve prognosis. In addition antenatal diagnosis of a lethal fetal chromosomal defect avoids unnecessary caesarean section in the fetal interest. Some women may opt for pregnancy termination at this stage. For these reasons, both the RCOG and NICE support the offering of a mid-trimester anomaly scan to all pregnant women, ideally at the 18-20 weeks stage.

Results from the present survey demonstrate a wide variation in the delivery of obstetric ultrasound services to pregnant women in Ireland. One of the more contentious results is the finding that, in 65% of Irish maternity units, women are not universally offered a mid-trimester scan for detection of fetal abnormalities. The concept of screening for structural anomalies in pregnancy does raise certain ethical dilemmas for many patients and practitioners. Traditionally, religious and cultural considerations and the unavailability of prophylactic terminations in Ireland have meant that Irish obstetric practice has been less proactive in identifying major structural fetal anomalies. There is also continuing debate on the benefits of routine lst trimester pregnancy scanning. Although the RCOG recommends an early pregnancy ultrasound scan for all women, a recent study found that routine booking ultrasound scans were associated with a small reduction in post-term pregnancy although there was little impact on the detection of clinically-significant anomalies. The current survey finds that 35% of pregnant women in Ireland were not offered a routine lst trimester ultrasound scan.

Expanding the availability of fetal anomaly scanning in Ireland would require close adherence to minimum standards of practice. The RCOG clearly recommends that all women should be provided with written information prior to the scan, that 20 minutes should be allocated to the anomaly survey and that, if required, referral to a fetal medicine specialist should be within 72 hours. Furthermore, all scan results should be clearly documented and archived, with a move towards developing computer-based records. A 2007 survey of Irish obstetric centres reported that only 15% of units were routinely performing routine fetal anomaly scanning. Although the current survey demonstrates an increase in this proportion over the last 5 years, further progress is required. Improvements in the availability of obstetric ultrasound to pregnant women in Ireland will require increased staffing numbers at both the ultrasonographer and fetal specialist levels. There is a clear need for national guidelines on the provision of routine obstetric ultrasound in Ireland.

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References


5. http://fetalanomaly.screening.nhs.uk/


